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## ABSTRACT OF THE DISCLOSURE

[0029] Reducing photoresist shrinkage by plasma treatment is disclosed. A semiconductor wafer having one or more photoresist layers is plasma treated, such as plasma curing, plasma etching, and/or high-density plasma etching the wafer. After plasma treating, one or more critical dimensions on the photoresist layers is measured using an electron beam, such as by using a scanning electron microscope (SEM). The plasma treating of the wafer prior to measuring the critical dimensions using the electron beam decreases shrinkage of the photoresist layer when using the electron beam.